

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

What is Claimed:

1. (Currently Amended) An active pixel sensor array sampling system comprising:
a video circuit that generates a video voltage from each one of a group of pixels in each column of pixels; and
a reference circuit that generates a unique reference voltage associated with each ~~one of the pixels in the group of pixels~~ pixel in each row of pixels;
wherein the video circuit comprises a plurality of video amplifiers, each video amplifier ~~being associated with a respective one of the pixels in the group of pixels,~~
wherein the reference circuit comprises a single reference amplifier associated with all of the pixels in the groups and rows of pixels, and
wherein the reference amplifier samples and holds ~~a the~~ the unique reference voltage for each one of the pixels in the groups and rows of pixels.
2. (Original) The system of claim 1 wherein each of the video amplifiers is associated with all of the pixels in a respective column of pixels.
3. (Original) The system of claim 1 further comprising a differential amplifier that generates a differential voltage responsive to the video voltage and the unique reference voltage associated with each pixel.
4. (Original) The system of claim 3 wherein the reference amplifier has an output continuously coupled to the differential amplifier during reading of the video voltage of each of the video amplifiers.
5. (Currently Amended) An active pixel sensor array sampling circuit that samples a voltage on each one of a plurality of pixels, the circuit comprising:
a plurality of video circuits, each video circuit generating a video voltage related to a voltage on a respective one of the pixels as its respective pixel is sampled; and
a reference circuit that samples a unique reference voltage as each video voltage is read from the video circuits,
wherein the pixels are arranged in columns and rows, the reference circuit is associated with all of the pixels of each row of pixels, and the reference circuit samples and holds the unique reference voltage as each video voltage of each pixel in a row of pixels is read.

6. (Canceled)

7. (Currently Amended) The circuit of claim ~~6~~5 further comprising a differential amplifier that provides a differential voltage representing a difference between each read video voltage and each sampled unique reference voltage.

8. (Original) The circuit system of claim 7 wherein the reference amplifier has an output continuously coupled to the differential amplifier during the reading of the video voltages for each row of pixels.

9. (Original) The circuit of claim 8 wherein each video amplifier is associated with all of the pixels of a respective column of pixels.

10. (Currently Amended) An integrated circuit including an active pixel sensor array sampling system comprising:

a plurality of video circuits, each video circuit sampling a video voltage from each one of a group of pixels in each column of pixels; and

a reference circuit that samples a unique reference voltage for each pixel in a row of pixels, as each video voltage is read from the video circuits.

11. (Previously Presented) The integrated circuit of claim 10 further comprising a differential amplifier that generates a differential voltage responsive to each read video voltage and its corresponding sampled unique reference voltage.

12. (Original) The integrated circuit of claim 11 wherein the pixels are arranged in columns and rows and wherein each video circuit is associated with all of the pixels of a respective column of pixels.

13. (Currently Amended) A method of sampling a group of active pixels comprising:
sampling a voltage on each pixel in a row of pixels to generate a video voltage for each pixel in the row of pixels;

serially reading each video voltage; and

sampling a unique reference voltage on each pixel in the row of pixels as each video voltage is read.

14. (Previously Presented) The method of claim 13 comprising the further step of generating a differential voltage from each read video voltage and its associated sampled unique reference voltage.

15. (Original) The method of claim 14 comprising the further steps of arranging the pixels in plural groups, and providing a single reference amplifier for all of the groups of pixels.

16. (Original) The method of claim 15 wherein the pixels are arranged in columns and rows, and wherein each group of pixels is a row of pixels.